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REMARKS

By this amendment, the Applicant proposes to amend certain pending claims as indicated above to overcome the final rejection and place the application in condition for allowance. The entry of this Amendment under Section 116 and the Examiner's allowance of all pending claims is earnestly solicited.

Within the first set of claims comprising claims 1-12, the Examiner has rejected claim 1 under Section 103(a) as unpatentable over Mizuno (5,276,509) and Huang (5,748,904).

The Applicant proposes to amend claim 1 as indicated above. In particular, paragraph (c) has been revised to recite, "assigning a second instruction to a plurality of successive data pixels, wherein the second instruction comprises a first bit field indicating the number of successive colored data pixels and a second bit field for each colored data pixel, and wherein contents of the second bit fields indicate the color of the associated colored data pixel, wherein a length of the second instruction is determined by the number of successive data pixels plus the number of bits required to designate one of the n different colors for each colored data pixel." Support for these changes can be found in the specification in paragraphs [0032] through [0035].

Claim 1 has been rejected under Mizuno in view of Huang, with specific reference to Huang's text in column 5, beginning at line 50. As can be seen from Figure 9, which represents the bit-map coding scheme described in Huang's referenced text, this coding scheme has a fixed length of 64 bits including a run segment of six bits, an index0 segment of four bits, an index1 of four bits and a bit-map data segment of 50 bits. The six-bit segment identifies the number of pixels that are encoded with the same color index, selected from either the color index0 segment or the color index1 segment. As Huang explains, these color indices each designate one of two colors. Thus the Figure 9 codeword is capable of designating one of two colors. The 50 bit segment denotes one of the two color indices that correspond to the number of pixels identified in the six-bit run length segment.

In contrast, as the Applicant has amended claim 1, it is seen that the Applicant's second instruction does not have a fixed length, but instead the length is dependent on the number of successive data pixels plus the number of bits required to designate one of the n different colors for each of the successive data pixels. For example, in a 32-color display, the Applicant requires five bits to designate one of the 32 colors. In an image line in which 90 pixels are colored data

8

pixels, the length of the second instruction is the product of the number of bits required to identify each of the 32 colors (five) and the number of pixels (90). Thus the Applicant's second instruction comprises 450 bits in this example of 90 successive pixels of the same color. The Huang fixed bit length instruction as illustrated in Figure 9 is thus distinguished. Since he uses a six-bit run that denotes the number of encoded pixels with the same color index, the length of his instruction is not impacted by the number of successive colored pixels. Instead, the number of successive colored pixels is set forth in binary form in the six-bit run length segment of his Figure 9 codeword.

Huang further states at line 44 of column 3 that the bit map encoding scheme described in conjunction with Figure 9 is generally the most efficient compression scheme for text data with only two colors. Huang's indices do not directly identify the color, but instead point to a second bit field that specifically identifies the color. Huang uses each one of his two four-bit color indices to point to a color register that stores either a 16-bit color or a 24-bit color. By indicating one of the two four-bit color indices, Huang can designate either one of two 16-bit colors or either one of two 24-bit colors using only four bits. Again, Huang's scheme is to be contrasted with the Applicant's, where the pixel colors are set forth directly in the instruction. Thus it can be seen that Huang does not disclose, "the number of bits required to designate one of the n different colors for each colored data pixel" because his four-bit indices do not directly identify the color, but instead merely point to a register where bits representing the actual color are stored.

Each of the dependent claims 2-12, depending either directly or indirectly from amended independent claim 1, has been rejected under Section 103(a) as unpatentable over Mizuno and Huang alone or in conjunction with one or more of Matsushiro (6,301,300), Imade (5,872,864), Tateyama (5,517,077), Cullen (5,781,665), Kelly (6,448,922), and Ozaki (5,345,316). The specific patents cited against each of the claims 1-12 is set forth in the Examiner's comprehensive final rejection and need not be repeated here.

It is respectfully submitted that each of the dependent claims 2-12, depending from amended independent claim 1, includes one or more elements that further patentably distinguish the invention over the art of record. These claims should therefore be in condition for allowance with the allowance of claim 1 based on the Applicant's arguments presented above.

9

Independent claim 13 stands rejected under Section 103(a) as unpatentable over Mizuno, Huang, Matsushiro, Cullen, Imade and Kelly.

As discussed above in conjunction with the rejection of claim 1, neither Mizuno nor Huang disclose at least the limitations of claim 13 as added by the current proposed Amendment. Further, Mizuno does not disclose such a limitation since it relates solely to bi-level images (i.e., having only black or white pixels). Cullen relates to cropping an image and not to instructions having a length determined as set forth in amended claim 13. Imade discloses an image compression technique including binarization of the image data and extracts features from the image based on image kind. Kelly discloses techniques related to combining ground based weather radar data with on-board weather radar indicators. Claim 13 is therefore allowable over the cited art.

As to rejected dependent claims 14-16 depending from claim 13 and all rejected under Mizuno and Huang and various combinations of Matsushiro, Cullen, Imade, Kelly and Fukumoto (JP 2001-265316), it is suggested that each of these dependent claims includes elements that further distinguish over the art of record and therefore should be in condition for allowance.

Claim 17 stands rejected under Section 103(a) as unpatentable over Mizuno, Huang, Matsushiro, Cullen, Imade and Kelly.

Claim 17 has been amended as set forth above to overcome the cited rejections. As discussed above in conjunction with the rejection of independent claims 1 and 13, the amendments set forth above to claim 17 are not disclosed or suggested by the cited art. Therefore, claim 17 is believed to be in allowable condition.

Claim 18 is rejected under Section 103(a) as being unpatentable over Mizuno, Huang, Matsushiro, Cullen, Imade, and Kelly and further in view of Wendt (4,422,180).
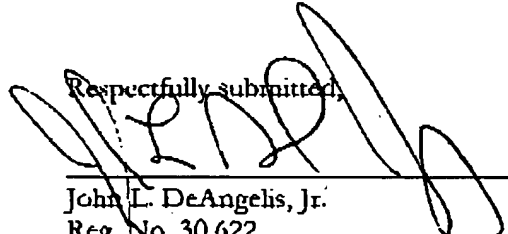
Claim 18 has been amended as set forth above. The remarks set forth with regard to the rejection of claim 1 and the limitations added thereto according to this proposed amendment apply with equal force to claim 18 and its amendments.

Claims 19 and 20 have been rejected under Section 103(a) over one or more of Mizuno, Huang, Matsushiro, Cullen, Imade, Kelly, Wendt, Marcy (3,916,436) and Waguri (6,370,278). Each of these claims is believed distinguishable over the art of record as each claim includes further elements distinguished from the cited art.

10

Since the proposed amendments overcome the current claim rejections, entry of the amendments and issuance of a Notice of Allowance for all pending claims is respectfully requested.

If a telephone conference will assist in clarifying or expediting this Amendment or the claim changes made herein, the Examiner is invited to contact the undersigned at the telephone number below.

Respectfully submitted,

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11